WHAT IS CLAIMED IS:

1. A picture encoding method comprising:

receiving an input video signal,

encoding the video signal using a reference

5 picture signal to generate a video code stream;

encoding the reference picture signal to generate

a reference picture code stream, and

multiplexing the video code stream with the

reference picture code stream to generate an output

10 code stream.

2. A picture encoding method according to

claim 1, wherein encoding the video signal includes

storing in a frame memory a local decoded picture

signal generated in encoding the video signal, and

15 encoding the reference picture signal including

encoding the reference picture signal read out from the

frame memory.

3. A picture encoding method according to

claim 1, wherein the reference picture signal includes

20 a plurality of picture signals obtained by subjecting

the encoded moving picture to a local decoding.

4. A picture encoding method according to

claim 1, wherein encoding the video signal encodes the

video signal in units of a macroblock, encoding the

25 reference picture signal encodes the reference picture

signal in units of a macroblock, and the multiplexing

maltiplexes the video code stream with the reference

picture code stream in units of a macroblock.

5. A picture encoding apparatus comprising:

a receiving unit configured to receive an input video signal,

a first encoding unit configured to encode the video signal by using a reference picture signal to generate a video code stream,

a second encoding unit configured to encode the reference picture signal to generate a reference picture code stream, and

a multiplexing unit configured to multiplex the video code stream and the reference picture code stream to generate an output code stream.

6. A picture encoding apparatus according to claim 5, wherein the first encoding unit includes a frame memory which stores a local decoded picture signal generated in encoding the video signal as the reference picture signal, and the second encoding unit encodes the reference picture signal read out from the frame memory.

7. A picture encoding apparatus according to claim 5, wherein the reference picture includes a plurality of pictures obtained by subjecting the encoded moving picture to a local decoding.

8. A picture encoding apparatus according to claim 5, wherein the first encoding unit includes a frame memory which stores a local decoded picture

signal generated in encoding the video signal as the
reference picture signal, and a motion compensation
unit configured to subject to motion compensation the
reference picture signal read out from the frame

5   memory, and the second encoding means encodes the
reference picture signal motion-compensated by the
motion compensation unit.

      9.   A picture encoding apparatus according to
claim 5, wherein the multiplexing unit includes a first

10   determination unit configured to determine whether or
not the input code stream containing the video code
stream and the reference picture code stream is the
reference picture code stream, a second determination
unit configured to, when the first determination unit

15   determines that the input code stream is the reference
picture code stream, determine whether or not to output
the reference picture code stream, and an output unit
configured to output the input code stream as the
output code stream in accordance with a result of the

20   second determination unit.

      10.   A picture encoding method according to
claim 5, wherein the first encoding unit encodes the
video signal in units of a macroblock, the second
encoding unit encodes the reference picture signal in

25   units of a macroblock, and the multiplexing unit
maltiplexes the video code stream with the reference
picture code stream in units of a macroblock.

11. A picture decoding method comprising:

receiving an input code stream containing a video code stream obtained by encoding a video signal and a reference picture code stream obtained by encoding a reference picture signal;

decoding the reference picture code stream contained in the input code stream to generate a first reference picture signal; and

decoding the video code stream contained in the input code stream by selectively using one of a second reference picture signal obtained from a previous picture signal and the first reference picture signal to generate a playback picture signal.

12. A picture decoding method according to claim 11, wherein decoding the video code stream includes storing in a frame memory the first reference picture signal and the playback picture signal as the second reference picture signal, and decoding the video code stream by selectively reading out the second reference picture signal and the first reference picture signal from the frame memory.

13. A picture decoding method according to claim 11, wherein decoding the video code stream includes storing the playback picture signal as the second reference picture signal in the frame memory, and decoding the video code stream by replacing the second reference picture signal stored in the frame

memory with the first reference picture signal.

14. A picture decoding apparatus comprising:

an input unit configured to receive an input code stream containing a video code stream obtained by

5 encoding a video signal and a reference picture code stream obtained by encoding a reference picture signal;

a first decoding unit configured to decode the reference picture code stream contained in the input code stream to generate a first reference picture

10 signal; and

a second decoding unit configured to decode the video code stream contained in the input code stream by selectively using one of a second reference picture signal obtained from a previous picture signal and the

15 first reference picture signal to generate a playback picture signal.

15. A picture decoding apparatus according to claim 14, wherein the second decoding unit includes a frame memory which stores the playback picture signal

20 as the second reference picture signal, together with the first reference picture signal, and decodes the video code stream by selectively reading out the second reference picture signal and the first reference picture signal from the frame memory.

25 16. A picture decoding apparatus according to claim 14, wherein the first decoding unit decodes a motion-compensated reference picture code stream which

is contained in the input code stream to generate the
first reference picture signal, and the second decoding
unit includes a frame memory which stores the playback
picture signal as the second reference picture signal,
and a motion compensation unit configured to subject
one of the second reference picture signal read out
from the frame memory and the first reference picture
signal to motion compensation.

17. A picture decoding apparatus according to
claim 14, further comprising a first determination unit
configured to determine whether or not the input code
stream is the reference picture code stream, a second
determination unit configured to, when the first
determining means determines that the input code stream
is the reference picture code stream, determine whether
or not to decode the reference picture code stream, and
a decoding unit configured to decode the input code
stream in accordance with a determination result of the
second determination unit.

18. A picture decoding apparatus according to
claim 14, wherein the second decoding unit includes a
frame memory which stores the playback picture signal
as the second reference picture signal, and decodes the
video code stream by replacing the second reference
picture signal stored in the frame memory with the
first reference picture signal.

19. A picture encoding program stored in a

computer readable medium, the program including:

means for instructing a computer to encode the video signal using a reference picture signal to generate a video code stream;

5   means for instructing the computer to encode the reference picture signal to generate a reference picture code stream; and

means for instructing the computer to multiplex the video code stream with the reference picture code

10   stream to generate an output code stream.

20. A picture encoding program stored in a computer readable medium, the program including:

means for instructing a computer to receive an input code stream containing a video code stream

15   obtained by encoding a video signal and a reference picture code stream obtained by encoding a reference picture signal;

means for instructing the computer to decode the reference picture code stream contained in the input

20   code stream to generate a first reference picture signal; and

means for instructing the computer to decode the video code stream contained in the input code stream by selectively using one of a second reference picture

25   signal obtained from a previous picture signal and the first reference picture signal to generate a playback picture signal.

21. A video code stream obtained by multiplexing a video code stream obtained by subjecting an input signal to motion compensation predictive encoding and a reference picture code stream obtained by independently encoding a reference picture signal used for the motion compensation predictive encoding.